



## European Astronomical Society 2011 Prizes

May 2011

The 2011 Tycho Brahe Prize is awarded to Prof. Michael Perryman for his crucial role in the fostering of high precision, global stellar astrometry from space, in particular the development of the Hipparcos mission.

The 2011 Lodewijk Woltjer Lecture is awarded to Prof. George Miley for his fundamental contributions to the study of radio galaxies.

### **1 Tycho Brahe Prize to Prof. Michael Perryman**

The Tycho Brahe Prize is awarded in recognition of the development or exploitation of European instruments, or major discoveries based largely on such instruments

Astrometry, the measure of the positions of stars on the celestial sphere, is a fundamental pillar of our knowledge of the Universe. As the centuries passed this knowledge grew little by little. The invention of the telescope and its use to map the sky brought a major step in the 17th and subsequent centuries. From this work a view of our Milky Way as a "Universe Island", a large collection of individual stars standing in the vastness of space, emerged in the early 20th century.

The Hipparcos mission was another immense step forward with the measurement of more than 100 000 stars with a precision such that their distance to the Earth could be established and their velocities on the sky measured. This led to a large number of fundamental

results. It is, as an example, possible from the velocities of stars measured with Hipparcos to understand how the Milky Way, our Galaxy, evolved over time.

Prof. Michael Perryman was the mission scientist and, during the operational phase, the mission manager of Hipparcos at the European Space Agency (ESA). In these roles he untiringly led the mission through many difficulties to its ultimate success. His understanding of the astrophysics, of the physics and technology involved in the satellite and its instruments as well as his intelligence of human relations contributed to a major extent to the success of the mission.

Prof. Michael Perryman is of British nationality. He was born in 1954, studied in Cambridge where he obtained his PhD in 1980. He then worked for ESA for the Hipparcos project and its successor mission until 2009, when he left for a visiting position in Heidelberg and now in Bristol.



Figure 1: Michael Perryman in 2011

## 2 Lodewijk Woltjer Lecture

The Lodewijk Lecture honours astronomers of outstanding scientific distinction.

The discovery of quasars, bright objects in the deep cosmos, in 1963 opened the possibility to observe objects at the farthest accessible distances and therefore in the still young Universe.

Many galaxies emit radio waves that are hundreds of times more powerful than those radiated by our own Milky Way Galaxy. These “radio galaxies” can be observed out to large distances and are the object of Prof. George Miley’s research. In the nineteen eighties and nineties Miley and his group discovered such objects at distances much larger than previously known. Subsequently, Miley’s group showed that these powerful distant radio galaxies were among the most massive galaxies in the young Universe and that they can be used to pinpoint and study clusters of galaxies that are just beginning to form. George Miley also established that the radio emission is generated by jet structures that extend over large distances, often requiring that the source of the jet “remembers” its direction for very long periods and is therefore likely to be a rotating black hole. In the seventies Miley showed that radio galaxies moving through clusters of galaxies leave radio “trails” behind them, that are fossil records of their histories.

Prof. George Miley was born in 1942 and has dual Irish and Dutch nationality. He studied at University College Dublin and obtained his PhD in 1968 from the University of Manchester, home of the Jodrell Bank radio telescope. He joined the staff of Leiden University in 1970 and has spent several years in the US, including 4 years on the staff of the Space Telescope Science Institute. Prof. Miley is the initiator of the “Universe Awareness” programme aimed to inspire economically disadvantaged children with astronomy and, as IAU Vice President, he has recently led the development of the IAU Strategic Plan 2010 - 2020, “Astronomy for the Developing World”.



Figure 2: George Miley in 2011

The European Astronomical Society (EAS) promotes and advances astronomy in Europe. As an independent body, the EAS is able to act on matters that need to be handled at a European level on behalf of the European astronomical community.

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